Hereby certify that the stal Service as first

CERTIFICATE OF MAILING

Hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner of Patents and Trademarks, Arlington, VA 22202, on the date appearing below.

ELI LILLY AND COMPANY

y Ginda M. Durbin

Date July 2, 2002

PATENT APPLICATION

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants	: Gerald Wayne Becker, et al.	)
Serial No.	: 10/018,383	)
Filed	: October 30, 2001	)
For	: AMYLOID PRECURSOR PROTEIN PROTEASE AND RELATED NUCLEIC ACID COMPOUNDS	) Confirmation No.: ) 7903
Docket No.	: X-11600	. )

### RESPONSE TO NOTIFICATION OF DEFECTIVE RESPONSE

**Assistant Commissioner for Patents** 

Arlington, VA 22202

Attention: Box Sequence

Sir:

This is in response to a "Notification of Defective Response" dated June 13, 2002, noting the absence of an acceptable Sequence Listing.

Enclosed herewith are:

- 1) a copy of the Notification;
- 2) a computer-readable copy of the Sequence Listing pursuant to 37 C.F.R. § 1.821(e);
- a paper copy of the Sequence Listing pursuant to 37 C.F.R. § 1.821(c);



# Serial No. 10/018,383

- 4) an affirmation pursuant to 37 C.F.R. § 1.821(f);
- a Supplemental Preliminary Amendment amending the specification to include the sequence listing;
- 6) an Information Disclosure Statement; and
- 7) a Form PTO-1449 (modified).

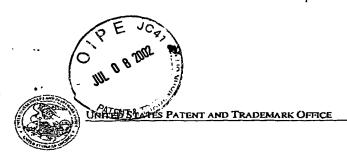
Respectfully submitted,

Paula K. Davis

Paula K. Davis Agent for Applicants Registration No. 47,517 Phone: 317-433-3422

Eli Lilly and Company Patent Division P.O. Box 6288 Indianapolis, Indiana 46206-6288

02 July 2002



Commissioner for Patents, Box PC Umted States Patent and Trademark Offic Washington, D.C. 2023

U.S. APPLICATION NUMBER NO. FIRST NAMED APPLICANT ATTY. DOCKET NO.

10/018,383 Gerald Wayne Becker X-11600

INTERNATIONAL APPLICATION NO.

PCT/US00/06707

Eli Lilly and Company
Patent Division/PKD

1.A. FILING DATE PRIORITY DATE

Patent Division/PKD

05/09/2000 05/11/1999

Eli Lilly and Company Patent Division/PKD Lilly Corporation Center Indianapolis, IN 46285

Date Mailed: 06/13/2002

#### NOTIFICATION OF DEFECTIVE RESPONSE

The following items have been submitted by the applicant or the IB to the United States Patent and Trademark Office as an Elected Office (37 CFR 1.495):

- U.S. Basic National Fee
- Priority Document
- Assignee Statement
- Biochemical Sequence Diskette
- Biochemical Sequence Listing
- · Copy of IPE Report
- · Copy of references cited in ISR
- Copy of the International Application
- · Copy of the International Search Report
- Oath or Declaration
- Preliminary Amendments

The following items **MUST** be furnished within the period set forth below in order to complete the requirements for acceptance under 35 U.S.C. 371:

Applicant is required to complete the response within a time limit of ONE MONTH from the date of this Notification or within the time remaining in the response set forth in the Notification of Missing Requirements, whichever is the longer. No extension of this time limit may be granted under 37 CFR 1.136, but the period for response set in the Notification of Missing Requirements may be extended under 37 CFR 1.136(a).

The following items MUST be furnished within the period set forth below:

- The nucleotide and/or amino acid sequence disclosure contained in this application does not comply with the requirements for such a disclosure as set forth in 37 CFR 1.821-1.825 for the following reason(s):
  - A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readabl form, however, does not comply with the requirements of 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."

- The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).
- APPLICANT MUST PROVIDE:
  - An initial or substitute computer readable form (CRF) of the "Sequence Listing."
  - An initial or substitute paper copy or compact disc of the "Sequence Listing," as well as an amendment directing its entry into the specification.
- For questions regarding compliance to 37 CFR 1.821-1.825 requirements, please contact:
  - For Rules Interpretation, call (703) 308-4216
  - To Purchase Patentin Software, call (703) 306-2600
  - For Patentin Software Program Help, call (703) 306-4119 or e-mail at patin21help@uspto.gov or patin3help@uspto.gov
  - A copy of the "Sequence Listing" in computer readable form has been submitted. The content of the computer readable form, however, does not comply with the requirements of 37 CFR 1.822 and/or 1.832, as indicated on the attached marked-up copy of the "Raw Sequence Listing."
  - The computer readable form that has been filed with this application has been found to be damaged and/or unreadable as indicated on the attached CRF Diskette Problem Report. A substitute computer readable form must be submitted as required by 37 CFR 1.825(d).

Applicant is reminded that any communications to the United States Patent and Trademark Office must be mailed to the address given in the heading and include the U.S. application no. shown above (37 CFR 1.5)

A copy of this notice MUST be returned with the response.

VONDA M WALLACE
Telephone: (703) 305-3736

#### PART 1 - ATTORNEY/APPLICANT COPY

U.S APPLICATION NUMBER NO.	INTERNATIONAL APPLICATION NO.	ATTY. DOCKET NO.
10/018,383	PCT/US00/06707	X-11600

FORM PCT/DO/EO/916 (371 Formalities Notice)







The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/0/8,383	
Source: PUT/10	
Date Processed by STIC: 6/4/2002	
Date Flocessed by 511C. 6/4/2000	
THE ATTRACTOR DELITEDING EVAL AND DETECTED EDBORG	· · · · · ·
THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS. PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:	
1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO	THE
APPLICANT, WITH A NOTICE TO COMPLY or,	THE
2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A	
NOTICE TO COMPLY	Gray and the state of the st
FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-42	212:
Tok Cita Bobinabion Quantition, Tabinab Continue Table 2012, 100 continue to the Cita Bobinabion Quantities of the Cita Bobinabion (Continue to the Cita Bobinabion (	
FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-	308-4216.
PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wa	ax)
PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. War	v) 1
PATENTING S.U e-mail neight pating ineligible production of photole 703-300-4115 (R. Was	u wih. Augs
	weel out it
TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECK	
VERSION 3.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND	entraet :
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS: 22 42222 2	ulli/Akr: OS
http://www.uspto.gov/web/offices/pac/checker	ក្រោះក្រោះ សេសមាស្រី មានបាន
netp.//www.aupeolgov/woo/onicouples-company	itale con production,
Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be	divoration there is
a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.	aware that there is
Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-	Romb =======
Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code a	address for the
United States Patent and Trademark Office, and instead should be sent via the following to the indica	ted addresses:
39	وممو
1. EFS-Bio ( <http: documents.htm≥0,="" downloads="" ebc="" efs="" su<="" th="" www.uspto.gov=""><th>bmission</th></http:>	bmission
	: gtg cat gtg ggt gca
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327; Arlington	
3. Hand Carry directly to:	15
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner	Name sty gas gto car
Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202	1438 TAN 1417 B NAT 624
· Or	30
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1803, Cryst	al Plaza Two, goo ago ob
2011 South Clark Place, Arlington, VA 22202	ONE ARM ALL THE LE.
4. Federal Express. United Parcel Service, or other delivery service to: U.S. Patent and Tradema	rk Officê, <sup>5</sup>
Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA	1 222020 CA CAG CTC RA
and the second control of the second control	de didita d'appear course conces mone
Revised 01/29/2002	60





PCT10

RAW SEQUENCE LISTING

DATE: 06/04/2002

PATENT APPLICATION: US/10/018,383 TIME: 14:56:06

Input Set : A:\X11600.ST25.txt

Output Set: N:\CRF3\06042002\J018383.raw

Does Not Comply Corrected Diskette Needec

```
3 <110> APPLICANT: Becker, Gerald
                                Hale, John
                               Heath, William
             5
                               Johnstone, Edward
             6
                                Little, Sheila
             7
                                Tu, Yuan
                                Yeh, Wu-Kuang
             9
                                Yin, Tinggui
           10
           12 <120> TITLE OF INVENTION: Amyloid Precursor Protein Protease and Related Nucleic Acid
Compounds
           14 <130> FILE REFERENCE: X-11600
C--> 16 <140> CURRENT APPLICATION NUMBER: US/10/018,383
C--> 16 <141> CURRENT FILING DATE: 2002-03-05
           16 <160> NUMBER OF SEQ ID NOS: 5
           18 <170> SOFTWARE: PatentIn version 3.1
           20 <210> SEQ ID NO: 1
            21 <211> LENGTH: 1683
           22 <212> TYPE: DNA
            23 <213> ORGANISM: Homo sapiens
            25 <220> FEATURE:
            26 <221> NAME/KEY: CDS
            27 <222> LOCATION: (25)..(1629)
            28 <223> OTHER INFORMATION:
            31 <220> FEATURE:
            32 <221> NAME/KEY: misc_feature
            33 <222> LOCATION: (25)..(1629)
                                                                                                                                                        100
                                                                                                                                                                 mig age typ thi it to that
           34 <223> OTHER INFORMATION: n = any nucleotide A, C, G, or T
                                                                                                                                                         10 Let Arg Cyk Jer-PhotAdr 81.
            37 <400> SEQUENCE: 1
            38 agetgtcage egecteacag gaag atg etg egg egg ege age cet-gge
                                                                              Met Leu Arg Arg Gly Ser ProlGly of the the type to the the tro-
            39
                                                                                 1
            40
                                                                                                                                                                                    99 2b5
            42 atg ggt gtg cat gtg ggt gca gcc ctg gga gca ctg tgg ttc tgeletc
            43 Met Gly Val His Val Gly Ala Ala Leu Gly Ala Leu Trp Phe Cystedic Got Gly Ago Cay of 44 10 15 20 25 The Gly Gly Ang Asp Cin Gl
            46 aca gga gcc ctg gag gtc cag gtc cct gaa gac cca gtg gtg gca ctg 1470
47 Thr Gly Ala Leu Glu Val Gln Val Pro Glu Asp Pro Val Val Ala Leu Gu Gu Gu Gu Gu Gu
                                                                                                                                                     40119 The Pro hop Lou Lou hla Cl.
                                                                                                      35
            50 gtg ggc acc gat gcc acc ctg tgc tgc tcc ttc tcc cct gag cct2ggc 315195 3
51 Val Gly Thr Asp Ala Thr Leu Cys Cys Ser Phe Ser Pro Glu Pro Gly T Cy 175 co 175 co 55
52 45 50 55 55 23 Val and Val and Val and Cys Cys Ser Phe Ser Pro Glu Pro Gly T Cy 175 co 175 co
                                                                                                                                                                                                                        320
                                                                                                                                                                                   243
             54 ttc agc ctg gca cag ctc aac ctc atc tgg cag ctg aca gat acc aaa
             55 Phe Ser Leu Ala Gln Leu Asn Leu Ile Trp Gln Leu Thr Asp Thr Lys
                                                                                                                                  70
                                                                                    65
             58 cag ctg gtg cac age ttt get gag ggc cag gac cag ggc agc gcc tat
```

RAW SEQUENCE LISTING DATE: 06/04/2002 PATENT APPLICATION: US/10/018,383 TIME: 14:56:06

Input Set : A:\X11600.ST25.txt

Output Set: N:\CRF3\06042002\J018383.raw

59 Gln 60	Leu Va	al His	Ser F	he Al 80	a Glu	Gly	Gln	Asp	Gln 85	Gly	Ser	Ala	Tyr		÷	
62 gcc		ന്ന കുറന	acc (		c cca	gac	cta	cta		cag	aac	aac	σca	339		
63 Ala	Asn A	ra Thr	Ala	Leu Ph	e Pro	Asp	Leu	Leu	Ala	Gln	Ğĺy	Asn	Ála			
64 90	71011 11.	-9		95				100					105			
66 tcc	cta a	aa cta	-	_	a cat	ata	aca	gac	gag	aac	agc	ttc	acc	387		
67 Ser	Leu A	ra Leu	Gln A	Arg Va	l Ara	Val	Ala	Asp	Glu	Gĺv	Ser	Phe	Thr			
68	Dou II.	.,	110	5	,		115			•		120	•	•		
70 tgc	ttc a	to ago		coo oa	t ttc	ggc	age	act	qcc	qtc	agc	ctg	cag	435		
71 Cys	Phe V	al Ser	Tle A	Ara As	p Phe	Gĺv	Ser	Ála	Ála	Val	Ser	Leu	Gln			
72	1	125		5	E	130					135					
74 gtg	acc a		tac 1	tcσ aa	a ccc	agc	atq	acc	cta	qaq	ccc	aac	aag	483		
75 Val	Ala A	la Pro	Tvr S	Ser Lv	s Pro	ser	Met	Thr	Leu	Ğlu	Pro	Asn	Lys			
76		40	-1-		145					150			_			•
78 gac			aaa c	ac ac	a ata	acc	atc	acq	tqc	tcc	agc	tac	cag	531		
70 gae 79 Asp	Leu A	ra Pro	Glv	Asp Th	r Val	Thr	Ile	Thr	Cys	Ser	Ser	Tyr	Gln	,	٠.	•
80	155	-9 0	0_1	16					165			-				
82 ggc		ct gag	act (			taa	caq	gat	qqq	cag	ggt	gtg	ccc	579 ·		•
83 Gly	Tvr P	ro Glu	Ala	Glu Va	l Phe	Trp	Gln	Asp	Gly	Gln	Gly,	Val	Pro		<i>n</i> → ••	
84 170				175		•	•	180	_			. ·	F185	mos nam	·- ·	٠.
86 ctg		oc aac	ata a	acc ac	a tca	caq	atq	gcc	aac	gag	cag	ġġċ	<sup>-</sup> ttg	627		-
87 Leu	Thr G	lv Asn	Val ?	Thr Th	r Ser	Gln	Met	Ala	Asn	Glu	Gln	Gly	Leu			
88		<b>-</b> 2	190		-		195					200				
90 ttt	σat σ	to cac	agc a	atc ct	a caa	qtq	gtg	ctg	ggt	gca	aat	ggc	acc	675		-
91 Phe	Asp V	al His	Ser	Ile Le	u Arg	val	Val	Leu	Gly	Ala	Asn	Gly.	Thr	1.0		
92		205				210					215		ું :	in aji 😜		•
	agc t	ac cta	ata (	cqc aa	c ccc	gtg	ctg	cag	cag	gat	gcg	cac	agc ==	-723 = -='-	=	· <u>-</u>
95 Tyr	Ser C	ys Leu	Val 2	Arg As	n Pro	Val	Leu	Gln	Gln	Asp	Ala	His	·Ser ^	, ;		4,
96		20		-	225					230				محود لل يواد	• •	
98 tct	qtc a	cc atc	aca	ccc ca	g aga	agc	ccc	aca	gga	gcc	gtg	gag	_	. 771		
99 Ser	val T	hr Ile	Thr :	Pro Gl	n Arg	Ser	Pro	Thr	Gly	Ala	.Val	Glu	'val'		. A.C.	<u>.</u>
100	235			2	40			•	24.	5						- ::
102 ca	g gtc	cct ga	g gac	ccg g	tg gt	g gc	c cta	a gt	g gg	c ac	c gat	t .gc		819		
103 Gl	n Val	Pro Gl	u Asp	Pro V	al Va	l Ala	a Leu	u <b>V</b> ai	1 G1;	y Th:	r Ası	o Al	a <sup>, U</sup> Thr.		530	
104 25	0			255				260	0			- 4	265 - 🗀	ស់សំខ្លួនកំខ្លួនកំ		3 - 3 5
106 ct	g cgc	tgc tc	c ttc	tcc c	ecc ga	g cc	t gg	c tt	c ag	c ct	a acs	a ca		··· 867.		
107 Le	u Arg	Cys Se	r Phe	Ser I	ro Gl	u Pr			e Se	r Le	u Ala	a Gl	n -Leu	525		
. 108			270				27	5						mddge erdi.		
110 aa	c ctc	atc tg	g cag	ctg a	ca ga	c ac	c aaa	a ca	g ct	g gt	g cad	c ag	だけせこ ツイ	SFOLTO NO	: 2	
111 As	n Leu			Leu 1	hr As			s Gl	n Le	u Va.	L His	s Se	rophe	LENGTH: 15 TYPE: PRT	34	
112		28	5			29	0				29	<b>.</b>	・・ラーベス・スノー	OLAZATEKI	Wanner o	i
114 ac	c gaa	ggc cg	g gac	cag g	gc ag	c gc	c ta	t gc	c aa	c cg	c acq	g gc	10 04 ≃0 2 0 × 10 4 0 £ 0 ± 2 ×	OF <b>963</b> (ISM)	110m0 S	~ p 2 (
	r Glu		g Asp	Gln (			а Ту	r Al	a As	n Ar	g Thi	r A.	a. Leu.	· PEATURE: · L. DE/KSY:	mico i	os tin
116		300			30	5	<b>.</b> .			31	U .			ጋር ፲፱፫/ // መጀ - ፲ብርክርስያ መደርስ ነገር	74233	: 4:0
118 tt	c ccg	gac ct	g ctg	gca d	aa gg	c aa	t gc	a tc	e et	g ag	y cr	y ca	g =cgc 	1101177011:	ስህ የአስተርህ	 
		Asp Le	u Leu			y As	n Ala	a Se	r Le	u Ar	у те≀	u Gl	n-Arg.~37	OTHER INF		• • •
120	315				120	_ 4.4		_ +-	32					/1059 G1	u. San.	21.0
122 gt	g cgt	gtg gc	g gac	gag	rgc ag	c tt	c ac	c tg	o pr	c gc	y ago	u de	c cgg	ANT ITE.		r Pn
123 Va	ı Arg	Val Al	a Asp	GIU (	та ге	T. ħU	e In	т су	s Pn	e va.	1 De	1	.29 <5.5.6>	FEATORS:		

RAW SEQUENCE LISTING DATE: 06/04/2002 PATENT APPLICATION: US/10/018,383 TIME: 14:56:06

Input Set : A:\X11600.ST25.txt

Output Set: N:\CRF3\06042002\J018383.raw

```
124 330
                           335
                                              340
                                                                 345
    126 gat ttc ggc agc gct gcc gtc agc ctg cag gtg gcc gct ccc tac tcg
                                                                         1107
    127 Asp Phe Gly Ser Ala Ala Val Ser Leu Gln Val Ala Ala Pro Tyr Ser
                       350
                                          355
    130 aag ccc agc atg acc ctg gag ccc aac aag gac ctg cgg cca ggg gac
                                                                         1155
    131 Lys Pro Ser Met Thr Leu Glu Pro Asn Lys Asp Leu Arg Pro Gly Asp
    132
                    365
                                       370
                                                          375
    134 acg gtg acc atc acg tgc tcc agc tac cgg ggc tac cct gag gct gag
                                                                         1203
    135 Thr Val Thr Ile Thr Cys Ser Ser Tyr Arg Gly Tyr Pro Glu Ala Glu
                380
                                   385
    138 gtg ttc tgg cag gat ggg cag ggt gtg ccc ctg act ggc aac gtg acc
                                                                         1251
    139 Val Phe Trp Gln Asp Gly Gln Gly Val Pro Leu Thr Gly Asn Val Thr
W--> 142 acg tcg cag atg gcc aac gag cag ggc ttg ttt nnn nnn nnn nnn nnn
                                                                         1299
  -> 143 Thr Ser Gln Met Ala Asn Glu Gln Gly Leu Phe Xaa Xaa Xaa Xaa Xaa
                           415
                                              420
19. . tg. .
                       430
                                          435
                                                                         1395 FT . CVE OF P
لمراتي > 150 nnn nnn nnn nnn nnn nnn gat geg eac gge tet gte ace ate aca ggg
W--> 151 Xaa Xaa Xaa Xaa Xaa Xaa Asp Ala His Gly Ser Val Thr Ile Thr Gly
                   445
                                      450
                                                          455
    154 cag cet atg aca tte eec cea gag gee etg tgg gtg ace gtg ggg etg
                                                                         1443
    155 Gln Pro Met Thr Phe Pro Pro Glu Ala Leu Trp Val Thr Val Gly Leu
                                  465
                                                      470 ". . . . ! =
    158 tot gto tgt etc att goa etg etg gtg gee etg get tte gtg tge tgg
                                                                         1491 -
                                                                        ·~ : ~
    159 Ser Val Cys Leu Ile Ala Leu Leu Val Ala Leu Ala Phe Val Cys Trp
                                                             ិញ្ញា ស៊ីពាស់ ម្ន<sup>ិ</sup>សាក្ខាត្ត៖
    160
            475
                               480
                                                  485
    162 aga aag atc aaa cag agc tgt gag gag gag aat gca gga gct gag gac...... 1539 🚟
                                                                                 163 Arg Lys Ile Lys Gln Ser Cys Glu Glu Glu Asn Ala Gly Ala Glu Asp. 700 TW: TTOM: (6 00) ... (61)
                                                                        1587
                                                            495
                                              500
    166 cag gat ggg gag gga gaa gge too aag abb get light for Leu Lys

167 Gln Asp Gly Glu Gly Glu Gly Ser Lys Thr Ala Leu Gln Pro Leu Lys

520
    166 cag gat ggg gag gga gaa ggc tcc aag aca gcc ctg cag cct ctg aaa
    170 cac tot gao ago aga gat gat gga caa gaa ata goo tga 122 1629 mm.
                                                              ्ठेटर ४२८८४ घरणी <mark>अस्य तान कर्त्</mark>हर ३५,
    171 His Ser Asp Ser Lys Glu Asp Asp Gly Gln Glu Ile Ala
                                                              227 <2725 LOCATION: (427)..(42)
                   525
                                      530
    174 coatgaggac cagggagetg ctaccectee etacagetee taccetetgg etgo: 
    177 <210> SEQ ID NO: 2
                                                          Thr, fle
                                                                        , wor, dis, asp, oi
    178 <211> LENGTH: 534
                                                               328
                                                                        Tyr. Trp. Cys. or Pl.
    179 <212> TYPE: PRT
                                                               223
    180 <213> ORGANISM: Homo sapiens
                                                               231 <220> FEATURE:
    182 <220> FEATURE:
                                                               222 <221> FAME/KEY: misc_feate
                                                               223 <222> LOCATION: (428)..(42
    183 <221> NAME/KEY: misc_feature
                                                               184 <222> LOCATION: (421)..(421)
    185 <223> OTHER INFORMATION: The / 'Xaa' at location 421 stands Thor Lys, Asn, Arg, Ser,
Thr, Ile
                                                               クミニ
                                                                   coop codon), Typ. Cys. or Ph
              , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu, 在 stop codon, 天安,
    186
             Tyr, Trp, Cys, or Phe.
                                                               122 1221 FLATE OF LITTED FEATURE AND THE AREA AMEND
    189 <220> FEATURE:
```

file://C:\Crf3\Outhold\VsrJ018383.htm

e in earlier in resplice de esse profite t The december of the english in the earlier

DATE: 06/04/2002

TIME: 14:56:06

```
Input Set : A:\X11600.ST25.txt
                     Output Set: N:\CRF3\06042002\J018383.raw
     190 <221> NAME/KEY: misc_feature
     191 <222> LOCATION: (422)..(422)
     192 <223> OTHER INFORMATION: The 'Xaa' at location 422 stands for Lys, Asn, Arg, Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu, a stop codon,
     193
                                                                                     sance
               Tyr, Trp, Cys, or Phe.
     194
                                                                                    ENOU
     196 <220> FEATURE:
     197 <221> NAME/KEY: misc_feature
     198 <222> LOCATION: (423)..(423)
     199 <223> OTHER INFORMATION: The 'Xaa' at location 423 stands for Lys, Asn, Arg, Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu, (a stop codon,
     200
               Tyr, Trp, Cys, or Phe.
     201
     203 <220> FEATURE:
     204 <221> NAME/KEY: misc_feature
     205 <222> LOCATION: (424)..(424)
     206 <223> OTHER INFORMATION: The 'Xaa' at location 424 stands for Lys, Asn, Arg, Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu, a stop codon,
     207
     208
               Tyr, Trp, Cys, or Phe.
     210 <220> FEATURE:
     211 <221> NAME/KEY: misc_feature
     212 <222> LOCATION: (425)..(425)
     213 <223> OTHER INFORMATION: The 'Xaa' at location 425 stands for Lys, Asn, Arg, Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu(
                                                                    a stop codon,
     214
               Tyr, Trp, Cys, or Phe.
     215
     217 <220> FEATURE:
     218 <221> NAME/KEY: misc_feature
     219 <222> LOCATION: (426)..(426)
     220 <223> OTHER INFORMATION: The 'Xaa' at location 426 stands for Lys, Asn, Arg; Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu,
     221
                                                                    a štop codom,
               Tyr, Trp, Cys, or Phe.
     222
     224 <220> FEATURE:
     225 <221> NAME/KEY: misc_feature
     226 <222> LOCATION: (427)..(427)
     227 <223> OTHER INFORMATION: The 'Xaa' at location 427 stands for Lys, Asn, Arg, Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu, a stop codon
     228
               Tyr, Trp, Cys, or Phe.
     229
     231 <220> FEATURE:
     232 <221> NAME/KEY: misc_feature
     233 <222> LOCATION: (428)..(428)
     234 <223> OTHER INFORMATION: The 'Xaa' at location 428 stands for Lys, Asn, Arg, Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu, a stop codon,
     235
     236
               Tyr, Trp, Cys, or Phe.
     238 <220> FEATURE:
     239 <221> NAME/KEY: misc_feature
     240 <222> LOCATION: (429)..(429)
     241 <223> OTHER INFORMATION: The 'Xaa' at location 429 stands for Lys, Asn, Arg, Ser,
Thr, Ile
                                                                     6.2.3
```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/018,383

, a sang dinang sa ang dinang naka men a manggang padahan sa ang dinang sa sa

```
242
         , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu, (a stop codon,
 243
         Tyr, Trp, Cys, or Phe.
 245 <220> FEATURE:
 246 <221> NAME/KEY: misc_feature
                                                                  TURD:
                                                                    Typ, Tyu, rie 21
                                                       មាននេះ ទេ កោកបក្ស
                                                       ing Cvs on Pr
                                                       ASS RAIDS OF HEAR INLOTMINIZOUS IN
                                                   Thr, Tle
            ...
                                                                ง และมี ติโดง ลิชมูง ติไฐง
                                                       264
                                                                igr, Trp, Cys, or Ph
                                                       185
                                                       287 <220> FEATURE:
                                                       268 K221A PAHI/REY: misc Teach
                                                       289 <222> LOCATION: (436)..(436)
                                                       33:0 <2015 COLLD LELD 05 100:
                                                   thr, Ile
                                                                . . or, Glo. map, Gli
                                                       201
                                                                Typ. Trp. Cys. or F.
                                                       292
                                                       294 <220> FERTURE:
                                                       and some Fire will whose fost
                                                       190 H122% DOCATION: (437), 74:
                                                            List of the processing
                                                   Thr, Ile
```

်းနှင့် =၏ နမါတု<sub>ိ့</sub> ကတ္တနှင့်သို့

358

DATE: 06/04/2002

```
PATENT APPLICATION: US/10/018,383
                                                              TIME: 14:56:06
                     Input Set : A:\X11600.ST25.txt
                     Output Set: N:\CRF3\06042002\J018383.raw
     247 <222> LOCATION: (430)..(430)
     248 <223> OTHER INFORMATION: The 'Xaa' at location 430 stands for Lys, Asn, Arg, Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu, a stop codon,
     249
     250
               Tyr, Trp, Cys, or Phe.
     252 <220> FEATURE:
     253 <221> NAME/KEY: misc_feature
     254 <222> LOCATION: (431)..(431)
     255 <223> OTHER INFORMATION: The 'Xaa' at location 431 stands for Lys, Asn, Arg, Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu, a stop codon,
     256
     257
               Tyr, Trp, Cys, or Phe.
     259 <220> FEATURE:
     260 <221> NAME/KEY: misc_feature
     261 <222> LOCATION: (432)..(432)
     262 <223> OTHER INFORMATION: The 'Xaa' at location 432 stands for Lys, Asn, Arg, Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu, a stop codon,
     263
     264
               Tyr, Trp, Cys, or Phe.
     266 <220> FEATURE:
     267 <221> NAME/KEY: misc_feature
     268 <222> LOCATION: (433)..(433)
     269 <223> OTHER INFORMATION: The 'Xaa' at location 433 stands for Lys, Asn, Arg, Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu, a stop codon
     270
               Tyr, Trp, Cys, or Phe.
     271
     273 <220> FEATURE:
     274 <221> NAME/KEY: misc_feature
     275 <222> LOCATION: (434)..(434)
     276 <223> OTHER INFORMATION: The 'Xaa' at location 434 stands for Lys, Asn, Arg, Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Ley, a stop codon
     277
     278
               Tyr, Trp, Cys, or Phe.
     280 <220> FEATURE:
     281 <221> NAME/KEY: misc_feature
     282 <222> LOCATION: (435)..(435)
     283 <223> OTHER INFORMATION: The 'Xaa' at location 435 stands for Lys, Asn, Arg, Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu/a stop codon,
     284
     285
               Tyr, Trp, Cys, or Phe.
     287 <220> FEATURE:
     288 <221> NAME/KEY: misc_feature
     289 <222> LOCATION: (436)..(436)
     290 <223> OTHER INFORMATION: The 'Xaa' at location 436 stands for Lys, Asn, Arg, Ser,
Thr, Ile
     291
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Lev, a stop codon
     292
               Tyr, Trp, Cys, or Phe.
     294 <220> FEATURE:
     295 <221> NAME/KEY: misc_feature
     296 <222> LOCATION: (437)..(437)
     297 <223> OTHER INFORMATION: The 'Xaa' at location 437 stands for Lys, Asn, Arg, Ser,
Thr, Ile
               , Met, Glu, Asp, Gly, Ala, Val, Gln, His, Pro, Leu a stop codon,
     298
                                        Please correct this
ever throughout Seguence 20
file://C:\Crf3\Outhold\VsrJ018383.htm
```

RAW SEQUENCE LISTING

·299 F. Tyr, Trp, Cys, or Phe.

301 <220> FEATURE: 302 <221> NAME/KEY: misc\_feature 303 <222> LOCATION: (438)..(438)

file://C:\Crf3\Outhold\VsrJ018383.htm

RAW SEQUENCE LISTING ERROR SUMMARY DATE: 06/04/2002 PATENT APPLICATION: US/10/018,383 TIME: 14:56:07

Input Set : A:\X11600.ST25.txt

Output Set: N:\CRF3\06042002\J018383.raw

#### Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

```
Seq#:1; N Pos. 1285,1286,1287,1288,1289,1290,1291,1292,1293,1294,1295,1296
Seq#:1; N Pos. 1297,1298,1299,1300,1301,1302,1303,1304,1305,1306,1307,1308
Seq#:1; N Pos. 1309,1310,1311,1312,1313,1314,1315,1316,1317,1318,1319,1320
Seq#:1; N Pos. 1321,1322,1323,1324,1325,1326,1327,1328,1329,1330,1331,1332
Seq#:1; N Pos. 1333,1334,1335,1336,1337,1338,1339,1340,1341,1342,1343,1344
Seq#:1; N Pos. 1345,1346,1347,1348,1349,1350,1351,1352,1353,1354,1355,1356
Seq#:1; N Pos. 1357,1358,1359,1360,1361,1362,1363,1364,1365
Seq#:1; Xaa Pos. 421,422,423,424,425,426,427,428,429,430,431,432,433,434
Seq#:1; Xaa Pos. 435,436,437,438,439,440,441,442,443,444,445,446,447
Seq#:2; Xaa Pos. 421,422,423,424,425,426,427,428,429,430,431,432,433,434
Seq#:2; Xaa Pos. 435,436,437,438,439,440,441,442,443,444,445,446,447
```